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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,341	03/29/2001	Timothy L. Hoopman	53628USA5D.013	6583

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EXAMINER

DEXTER, CLARK F

ART UNIT PAPER NUMBER

3724

DATE MAILED: 04/08/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/821,341

Applicant(s)
Hoopman

Examiner
Clark F. Dexter

Art Unit
3724



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Dec 19, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-45 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 19, 2002 has been entered.
2. The amendment filed December 2, 2002 has been entered. It is noted that in view of the amendment practice under 37 CFR 1.121 which was enacted for all amendments on March 1, 2001, and due to the limited amount of examining time per application, if the amendment contains changes to existing language that requires a marked-up version showing those changes, the Examiner is relying upon the marked-up version(s) for examination of the application. It is applicant's responsibility to ensure that the clean version(s) is (are) the same as the marked-up version(s). It is further noted that the clean version(s) is (are) considered to be the Official version(s).

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Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “first and second surfaces having an undercut resulting in a positive rake angle” as now set forth in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 37-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sloane, pn 2,585,971.

Sloane discloses a device with almost every structural limitation of the claimed invention but lacks the first and second faces having an undercut. However, the Examiner takes Official notice that providing an undercut on the side of a gear is old and well known in the art and provides various well known benefits including providing relief from adjacent gears or for

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accommodating structure adjacent the gears. Therefore, it would have been obvious to one having ordinary skill in the art to provide an undercut on the sides (i.e., the first and second faces) of the gear of Sloane for the well known benefits including those described above.

Regarding claims 39, 40, 43 and 44, Sloane lacks an explicit disclosure of the specific difference in included angles. However, the Examiner takes Official notice that to provide a plurality of teeth that include angles that differ by at least 3 degrees and at least 10 degrees is old and well known in the art for various known benefits such as for providing the desired speed changing influence. Further, such a modification would be the mere discovery of the optimum or workable ranges within the general conditions of the prior art by routine experimentation. Therefore, it would have been obvious to one having ordinary skill in the art to provide teeth having different configurations with the claimed angle differences for the well known benefits including those described above.

Response to Arguments


6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clark Dexter whose telephone number is (703) 308-1404. The examiner's typical work schedule is Tuesday through Friday, and he can be reached during normal business hours on these days.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Allan Shoap, can be reached at (703)308-1082.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)308-1148. The fax numbers for this group are: formal papers - (703)305-3590; informal/draft papers - (703)305-9835.



Clark F. Dexter
Primary Examiner
Art Unit 3724

cfd
April 7, 2003